

IN THE CLAIMS

1-33 (canceled)

34. (unchanged) An optical system, comprising:
a stack of at least two optical sheets, at least one of the optical sheets including a surface replicated with a micro-structured optical element and at least one three-dimensional optical element.

35. (Unchanged) A system as recited in claim 34, wherein the replicated micro-structured optical element has a feature height of less than 10 μm .

36. (Unchanged) A system as recited in claim 34, wherein the replicated micro-structured optical element is a transmissive diffractive optical element.

37. (Withdrawn) A system as recited in claim 34, wherein the replicated micro-structured optical element is a reflective, diffractive optical element.

38. (Unchanged) A system as recited in claim 34, wherein the three-dimensional optical element having a vertical dimension of at least 100 μm relative to a replication base surface

39. (Unchanged) A system as recited in claim 34, wherein the three-dimensional optical element has a vertical dimension of at least 500 μm relative to a base surface.

40. (Unchanged) A system as recited in claim 34, wherein the three-dimensional optical element has a vertical dimension of at least 1 mm relative to a base surface.

41. (Unchanged) A system as recited in claim 34, wherein at least one of the optical sheets includes a first surface replicated with at least a first optical element and a second surface replicated with at least a second optical element.

42. (Unchanged) A system as recited in claim 34, further comprising one or more spacers interposed within the stack of at least two optical sheets.

43. (Unchanged) A system as recited in claim 34, wherein at least one of the optical sheets includes an integrated spacer.

44. (Unchanged) A system as recited in claim 34, wherein an optical path within the stack passes from a first optical element on a first optical sheet to a first optical element on a second optical sheet and to a second optical element on the first optical sheet.

45. (Unchanged) A system as recited in claim 44, wherein the first and second elements on the first optical sheet are on a first surface of the first optical sheet.

46. (Unchanged) A system as recited in claim 34, further comprising at least one active optical element disposed on one of the optical sheets.

47. (Unchanged) A system as recited in claim 34, further comprising at least one passive optical element attached to a surface of one of the optical sheets.

48. (Currently amended) An optical system, comprising:

a plurality of stacked optical sheets, each of the stacked optical sheets including at least one optical element replicated on a surface to define the optical circuit;

wherein an optical path within the plurality of stacked sheets passes from a first optical element on a first optical sheet of the plurality of stacked optical sheets to a first optical element on a second optical sheet of the plurality of stacked optical sheets and to a second optical element on the first optical sheet.

49. (Unchanged) A system as recited in claim 48, wherein the optical path further passes from the second optical element on the first optical sheet to a second optical element on the second optical sheet.

50. (Unchanged) A system as recited in claim 48, wherein the first and second optical elements on the first optical sheet are on a first surface of the first optical sheet.

51. (Unchanged) An system as recited in claim 48, wherein the first and second optical elements on the first optical sheet are respectively on first and second surfaces of the first optical sheet.

52. (Unchanged) An system as recited in claim 48, wherein one of the optical sheets includes a surface replicated with a micro-structured optical element.

53. (Withdrawn) An system as recited in claim 52, wherein the micro-structured optical element is a reflective diffractive optical element.

54. (Unchanged) An system as recited in claim 52, wherein the micro-structured optical element is a transmissive diffractive optical element.

55. (Unchanged) A system as recited in claim 48, further comprising one or more spacers interposed within the plurality of stacked optical sheets.

56. (Unchanged) A system as recited in claim 48, wherein one of the optical sheets defines a sheet plane and has a surface replicated with an optical element having a dimension of at least 100 μm in a direction perpendicular to the sheet plane.

57. (Unchanged) A system as recited in claim 48, wherein one of the optical sheets defines a sheet plane and has a surface replicated with an optical element having a dimension of at least 500 μm in a direction perpendicular to the sheet plane.

58. (Unchanged) A system as recited in claim 48, wherein one of the optical sheets defines a sheet plane and has a surface replicated with an optical element having a dimension of at least 1 mm in a direction perpendicular to the sheet plane.

59. (Unchanged) A system as recited in claim 48, wherein at least one of the optical sheets includes an integrated spacer.

60-77 (canceled)